



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

45

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,640	02/21/2002	Peter E. von Behrens	26625-1002	8160
23419	7590	11/18/2003	EXAMINER	
COOLEY GODWARD, LLP 3000 EL CAMINO REAL 5 PALO ALTO SQUARE PALO ALTO, CA 94306			NGUYEN, HOANG M	
		ART UNIT		PAPER NUMBER
		3748		
DATE MAILED: 11/18/2003				

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/080,640	VON BEHRENS ET AL.	
	Examiner	Art Unit	
	Hoang M Nguyen	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 October 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-19 and 21-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-19, 21-24 and 27-36 is/are rejected.
- 7) Claim(s) 25 and 26 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>8</u> . | 6) <input type="checkbox"/> Other: _____ . |

Art Unit: 3748

Applicant's amendment dated August 28, 2003, has been fully considered.

Applicant has amended the claims and include new limitation "a recess formed in the heat sink separates the end of at least one SMA wire from the heat sink." and has argued that the applied references do not disclose the claimed invention. The Examiner strongly disagrees. The recess herein is simply the ends of the heat sink. Gummin discloses at both ends of the heat sink 41, there are holes for the SMA 36 to go through. Those holes read on the recess as claimed

Applicant has argued that the 102(e) rejection should be withdrawn because in SN 09/637713, now US. Patent 6326707, no heat sink is claimed. Please note figure 4 of this application is the same as figure 7 in SN 09/637,713, the rejection is based on the whole disclosure of the application, not only the claims. So, the 102 (e) rejection must be maintained.

For the new set of claims 21-36, a new ground of rejection have been made.

This Office Action has been made non-final because the Examiner modifies the obviousness double patenting rejection.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

Art Unit: 3748

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

Claims 1-3, 14-15, 17-18, 21, are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. 6326707 (Gummin et al).

Gummin et al discloses a shape memory alloy actuator comprising a plurality of conductive plates with SMA wires 36A-D, the output of the actuator is the total movement of all SMA wires.

Claims 1-19, 21, are rejected under 35 U.S.C. 102(e) as being fully anticipated by U.S. patent 6574958.

Claims 22-24, 27-33, 36, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 4027953 (Jacob).

Jacob discloses a thermal actuator comprising a rigid elongate member (housing 12) having a recess formed therein, bimetal elements 20, 22, being shape memory alloy wires mounted inside said recess wherein the first ends of said elements are mounted to the recess.

Claims 22-24, 27-33, 36, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 4806815 (Honma).

Art Unit: 3748

Honma discloses a thermal actuator comprising a rigid elongate member (housing 1) having a recess formed therein, bimetal element 6 being shape memory alloy wires mounted inside said recess wherein the first ends of said elements are mounted to the recess.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 6326707 (Gummin et al) in view of U.S. 2518941 (Satchwell). Gummin discloses all the claimed subject matter as set forth above in the rejection of claim 1, but does not disclose an insulating layer between the conductive plates. Satchwell et al is relied upon to disclose that it's well known to have insulating layer 4 between conductive plates to prevent shocks. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide insulating layer between the conductive plates in Gummin et al as taught by Satchwell for the purpose of preventing shock.

Claims 6-13, 16-18, are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 6326707 (Gummin et al). Gummin discloses all the claimed subject matter as set forth in the rejection of claim 1, but does not disclose the specific distance and dimension as claimed.

Art Unit: 3748

However, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the actuator in Gummin et al to have the specific distance and dimension as claimed for the purpose of obtaining appropriate outputs from said specific dimensions.

Claim 19 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 6326707 (Gummin et al) in view of U.S. 5165897 (Johnson). Gummin discloses all the claimed subject matter as set forth above in the rejection of claim 1, but does not disclose the actuator activating a switch of a power circuit. Johnson discloses an SMA actuator comprising SMA wire 28 for actuating a power circuit switch 50. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the actuator in Gummin et al to activate a power circuit switch as taught by Johnson for the purpose of switching the circuit on/off.

Claims 34-35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 4027953 (Jacob). Jacob discloses all the claimed subject matter as set forth above in the rejection of claim 22, but does not disclose the second spacing is greater than the first spacing and is related to the distance between the shape memory alloy and the recess. However, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the size and the shape of the second spacing in Jacob for the purpose of achieving appropriate work output.

Art Unit: 3748

1. Claims 1-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the pending claims of US patent 6574958 in view of U.S. 6326707 (Gummin et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons.

US 6574958 recites all the claimed subject matter as claimed in this application but the arrangement of the claimed elements is different, for example, some elements are cited in dependent claims instead of in the independent claims in this application, and no heat sink. Gummin et al discloses that it's well known to provide a heat sink 41. It would have been obvious to provide a heat sink in the system of US patent 9574958 as taught by Gummin et al for the purpose of removing heat. Moreover, a person having ordinary skill in the art would have rearrange the claimed elements to be the same as the arrangement in this application for the purpose of obtaining the same results.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

Art Unit: 3748

F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 3748

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Nguyen whose telephone number is (703) 308-3477. The examiner can normally be reached on Monday--Thursday from 7:30 AM to 6:00 PM.

Any inquiry concerning any general questions regarding patent examining policies and procedures should be directed to Patent Assistance Center (PAC) at 800-PTO-9199 or (703)-308-HELP (703)-308-4357), or Customer Service of TC 3700 at (703) 306-5648.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion, can be reached on (703)-308-2623. The fax phone number for the Examiner is (703) 746-4559.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0861.



HOANG NGUYEN
PRIMARY EXAMINER
ART UNIT 3748

Hoang Minh Nguyen
November 14, 2003